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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,475	06/27/2001	Lynn Bich-Quy Le	8032987/JAS	5940

7590

05/16/2002

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EXAMINER

NGUYEN, HANH N

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 05/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/894,475

Applicant(s)LE ET AL. *MC***Examiner**

HANH NGUYEN

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to because the reference sign (140) on the left hand-side of Fig. 2 is not readable, numbers and lines in drawings from Fig. 2 to Fig. 5 were not clearly shown. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. Claim 19 is objected to because of the following informalities: "as claimed in claim 2" should be changed to --- *as claimed in claim 12*---. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 4-6,8-10 and 18 are Rejected under 35 U.S.C. 112, second paragraph, because they contain relative terminology.

The term "about" in claims 4,8,10,18 is a relative term which renders the claims indefinite. The term "about" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. Also, the term "approximately" in claims 5,6,9,17 is a relative term which renders the claims indefinite.

4. Claims 12,14-20 are Rejected under 35 U.S.C. 112, second paragraph, because there is insufficient antecedent basis for limitations in the claims.

Claim 12 recites the limitation "the arm" in line 10. There is insufficient antecedent basis for this limitation in the claim.

Claims 14-19 recite the limitation " a spindle motor" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 20 recites the limitation "the upraised wall" in line 10. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

5. Claim 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Miura et al.

Regarding claim 1, Miura et al. disclosed a spindle motor for use in a disk drive comprising a shaft (41 in Fig. 2) supporting a thrust plate (43) at one end thereof, a sleeve (33) surrounding the shaft, and rotatable relative to the shaft and supporting a hub (34) on the outer surface thereof, the sleeve having a surface adjacent the thrust

plate (33a) and cooperating with the shaft to define a journal bearing and with the thrust plate to define a first fluid dynamic thrust bearing (Sba), a counterplate (43) welded (abstract) to an upraised axial shoulder of the sleeve and having a surface located adjacent a surface of the thrust plate to define at least a second fluid dynamic thrust bearing (SBb), fluid within the first and second thrust bearings and the journal bearing supporting relative rotation of shaft and sleeve, and a groove region (groove 1 or 2) defined in the shoulder of the sleeve radially aligned with adjacent the counter plate.

Regarding claim 12, it is noted that Miura et al. have fulfilled all the limitation of the claimed invention when showing a fluid dynamic bearing with a groove region (1 or 2) defined in the arm of the sleeve (or shoulder of sleeve) radially aligned with adjacent the counter plate.

Regarding claim 20, it is noted that Miura et al. have fulfilled all the limitation of the claimed invention when showing a fluid dynamic bearing with means (groove 1 and 2) defined in the upraised shoulder for weakening the radial stiffness of the wall.

Regarding claim 2,3,13 and 14, Miura et al. also show a fluid dynamic bearing for use in a spindle motor wherein the groove region (groove 1) extends at least part way axially into the radially inner portion of the sleeve shoulder (or arm) and the groove additionally extends into the radially outer surface of the counterplate (tapered along the radially outer surface of the counter plate).

Regarding claim 11, Miura et al. also show a spindle motor wherein the radially outer wall of the groove (groove 1) is tapered toward the radially outer wall of the shoulder.

Regarding claim 4 and 16, Miura et al. also show a spindle motor wherein the grooved region (groove 1) extends to about half the axially extent of the counterplate.

Regarding claim 5 and 6, Miura et al. also show a spindle motor wherein the groove (groove 2) is cut into the radially outer surface of the sleeve arm in a region near to the gap between the counterplate and the thrust plate and the groove is as an axially extent which is approximately half the width or axial width of the counterplate.

Regarding claim 7,8,15 and 16, Miura et al. also show a spindle motor wherein the groove (groove 2) extends axially down the radially outer surface of the sleeve arm and the groove has an axial extent equal to about half the axial depth of the counterplate.

Regarding claim 9,10,17 and 18, Miura et al. also show a spindle motor wherein the groove (groove 1) extends radially away from the counterplate into the sleeve, and extends from a point near to the junction between the radial and axial walls of the sleeve wall approximately part way toward the upper axial surface of the arm and the groove is about half the axial width of the sleeve wall and about half the axial extent of the counterplate.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh N Nguyen whose telephone number is (703) 305-3466. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers

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Art Unit: 2834

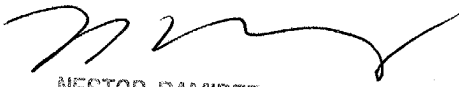
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for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

HNN

May 6, 2002



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